

## CLAIMS

What is claimed is:

1. A graft compatible with living animal tissue, said graft comprising a thin flexible substrate having an attachment region biocompatible with said tissue, said attachment region being engageable with said living animal tissue for attachment of said substrate thereto, said attachment region having means for promoting growth of said living animal tissue across said attachment region to sealingly attach said substrate to said tissue.

2. A graft according to Claim 1, wherein said growth promoting means comprises a plurality of pores extending throughout said attachment region, said pores being sized to promote growth of said living animal tissue within said pores and thereby across said attachment region.

3. A graft according to Claim 2, wherein said substrate comprises a plurality of interlaced filamentary members, said pores being defined by interstices formed between said filamentary members.

4. A graft according to Claim 3, wherein said substrate comprises an elongated tube, one of said attachment regions being positioned at each end of said tube.

5. A graft according to Claim 4, wherein said tube is a bifurcated tube.

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7. A graft according to Claim 6, wherein said pores extending throughout said attachment regions are sized to provide a permeability of about 1000 cc/cm<sup>2</sup>/min for promoting growth of said living animal tissue across said attachment regions, said portion of said tube between said attachment regions having a permeability of about 300 cc/cm<sup>2</sup>/min and being substantially fluid impermeable.

9. A graft according to Claim 8, wherein said coating is selected from the group consisting of thrombin, collagen and silicone.

16. A graft according to Claim 2, wherein said substrate comprises a thin flexible membrane of expanded polytetrafluoroethylene, said membrane being expanded in said attachment region at an expansion rate adapted to form said pores sized to promote growth of

17. A graft according to Claim 16, wherein said membrane comprises an elongated tube, one of said attachment regions being positioned at each end of said tube, said membrane between said attachment regions being formed by expanding said polytetrafluoroethylene at a second expansion rate relatively lower than said first named expansion rate thereby yielding a substantially impermeable tube between said attachment regions.

19. A graft according to Claim 18, wherein said coating is selected from the group consisting of thrombin, collagen and silicone.

21. A graft according to Claim 1, wherein said growth promoting means comprises a textured surface positioned at said attachment region, said textured surface having an increased surface area favoring growth of said living animal tissue across said attachment region.

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A graft according to Claim 21 surface comprises a plurality outwardly from said substrate said increased surface area f living animal tissue.

A graft according to Claim 22 comprises a plurality of inte ry members, said filamentary m rring interlacing at least in form said loops extending out ured surface.

A graft according to Claim 22 comprises a plurality of fila d by weaving and said loops co d at least in said attachment outwardly to form said textur

A graft according to Claim 21 comprises a plurality of inte ry members, said filamentary m Filamentary members at least i t region, said textured filame creased bulk providing said in ring growth of said living ani

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27. A graft according to Claim 26, wherein said coating is selected from the group consisting of thrombin, collagen and silicone.

28. A graft according to Claim 1, wherein said attachment region comprises a surface having a coating which promotes healing of living animal tissue.

29. A graft according to Claim 28, wherein said coating is selected from the group consisting of thrombin, collagen and silicone.

30. A graft according to Claim 1, wherein said substrate comprises a plurality of interlaced first filamentary members formed of a first material, said attachment region comprising a plurality of interlaced second filamentary members formed of a second material different from said first material, said second material having a characteristic eliciting a healing response from living animal tissue.

31. A graft according to Claim 30, wherein said second material is selected from among the group consisting of nylon, polypropylene and polyethylene.